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Andrei G. Aleinikov
Col, Russian Army

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AIR WAR COLLEGE
325 CHENNAULT CIRCLE
MAXWELL AFB AL 36112-6427

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LEADERSHIP INNOVATIONS

by
Andrei G. Aleinikov
Colonel, Russian Army

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A RESEARCH REPORT SUBMITTED TO THE FACULTY
IN
FULFILLMENT OF THE CURRICULUM
REQUIREMENT

Advisors: Colonel Steven E. Cady
Colonel Theodore C. Hailes

MAXWELL AIR FORCE BASE, ALABAMA
April 1993

LEADERSHIP INNOVATIONS

"Wars may be fought with weapons, but they are won by men. It is the spirit of men who follow and of the man who leads that gains the victory."

Gen. George S. Patton

"The only way to lead people is to show them a future; a leader is a dealer in hope."

Napoleon Bonaparte

THESIS

Innovation plays a key role in winning wars and battles. For that reason, military education should direct a major part of its efforts toward teaching innovation to its leaders.

INTRODUCTION

The relationship between leadership and innovation has many facets. However, two major aspects of this relationship require special emphasis, namely:

- 1) innovation in leadership, which takes into account the role and significance of innovation for leadership, and
- 2) leadership in innovation, which is not simply a reversal of the terms, but an understanding of the need to lead in the development of innovation.

In order to check the validity of my thesis, first, I would like to reflect on what historians have said about the subject. Military history consists of legends and real stories, descriptions and explanations of how this or that leader used new ideas in technology or in strategy to gain his objectives.

"Sparta produced the best heavy infantry in the Hellenic world... Her victories over the armies of other Greek city-states were the victories of whole-time regular forces over citizen militias..."¹ This was innovative for that time.

"The effort to find a tactical organization in which fire power and infantry shock tactics could be combined led to the major innovations of Maurice of Nassau at the beginning of the seventeenth century... Gustavus Adolphus developed and applied these methods successfully in war, and the system he evolved persisted in essentials well into the twentieth century."² These and other innovations brought Gustavus Adolphus "great victories" and earned him the title of "genius."

Closer to our times - were the Napoleonic wars. "The power of the Revolutionary army was not only due to their numbers and enthusiasm... It was also due to the intelligent application of ideas borrowed from innovators in the old royal army... In summary form, these ideas called for: (1) infantry tactics based on the column for rapid maneuver and deployment; (2) the exploitation of improved artillery for quick concentration against a hostile line; (3) and the organization of armies into 'divisions' for greater strategic flexibility, surprise, and ease of foraging."³ Keep in mind that, for Napoleon, this was "borrowing" ideas -- not "producing" them.

We are more familiar with recent technological innovations. The mere mention of tanks, aircraft, submarines, missiles, and the impact of the atomic bombs used against Japan in 1945⁴ would be sufficient to emphasize the role of modern technological innovations in waging war.

While the exploitation of innovation has helped to achieve success in war, the lack of an ability to produce innovations and to employ them, has led to defeat.

"The French came into World War I the slaves of an abstract military concept which was totally invalid..."⁵ During their first offensive in Lorraine which failed, they lost 300,000 soldiers; this was nearly one third of the total losses that the French suffered throughout the entire World War I. The British made a similar mistake in miscalculating the force of machine-guns. On the 26th of September 1915, they lost 385 officers and 7,861 enlisted from a force of 10,000.

J.W. Hackett ascribes the same reason for both the French and British losses: "Neither had the intellectual capacity to evaluate the importance of new techniques or the imagination to break the bonds of [their] own experience."⁶

The lack of leadership in innovation was a major factor in the decline of Sparta as a state. "Her defeat by the Theban Epaminondas at Leuctra in 371 (largely through a novel oblique tactical approach, of immense future significance) left her no more than an archaic relic fading into obscurity."⁷

What about Napoleon? He was considered a military genius. Carl von Clausewitz alluded to Napoleon in his writings "On military genius" by mentioning "coup d'oeil" and "determination".

> need transition - a bit abrupt ↓

Napoleon suffered the same fate as the commanders in Sparta - complete defeat. In Russia, where Napoleon lost over a half million soldiers, as well as at Waterloo, where he met his final defeat, he possessed the same "coup d'oeil" and the same "determination" as before. If he was such a military genius, why did he fail? For me, there is no conflict here -- "borrowing" new ideas can bring temporary success, but when your ideas become known to your military opponents, they cease to be effective. His enemies had studied his patterns of waging war and learned from their mistakes. Over time, his previously successful methods of waging war began to fail. If he had produced adequate new ideas, the situation might have changed; then we would have more reason to call him "genius."

After looking through historical examples, let us ask ourselves: Do we have ways to properly evaluate new techniques and the imagination to break through the bonds of our own experience? Do our leaders accept innovative techniques and are they ready to put them into action? Are we prepared to educate future innovative leaders to become victorious leaders?

This begs the question of paradigms - but well, you

Before answering these questions, first it is necessary to take a quick look at the main terms used in this paper: "innovation in leadership" and "leadership in innovation."

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THEORY, AS AN INSTRUMENT OF ANALYSIS FOR INNOVATION IN LEADERSHIP

There are many books on leadership,⁹ but there is no single, commonly accepted definition of leadership. More often than not, these books merely list some desired attributes of a leader.¹⁰ Attempts to define leadership usually contrast it with "followership", management,¹¹ or sometimes - with "headship."¹² These divisions change from author to author who often use terms that are very close in meaning but differ in form. For example, the term "transforming" leadership¹³ (as opposed to "transactional" leadership) in one publication is referred to as "transformational" leadership in another.¹⁴

need to distinguish
between "innovation" and
"flexibility"...

This basic terminology is very useful, even if it is vague. For instance, it helps to distinguish between a Transactional leader, who only reacts to changes within the environment and a Transformational leader, who, himself, creates the desired environment. Michael J. Kirton has further expanded on these terms and developed a tool to differentiate between "adaptors" (Transactional leaders), "innovators" (Transformational leaders), and the "bridgers" that link them. Research has shown that 67% of the observed leaders fell into the category of "bridgers" which has the characteristics of both adaptors and innovators.¹⁵ This use of mathematical approaches shows some movement from a checklist mentality to a practical exploration and lead the way for developing a plausible theory.

Nevertheless, some authors consider, and I agree, that there is no true leadership theory because existing literature is merely a series of descriptions, empirical generalizations, concepts, or sets of behavior rules.¹⁶

The same can be said about a theory of innovation. Much has been written about the necessity of developing new products, new ideas, new methods... i.e., "producing the new" and "implementing the new", but there was no theory of "the new" and of innovation.

A good place to start is to examine the internal form of the word "innovation." In+nov+at(e)+ion -- has a prefix, with the meaning "inside"; a root derived from Latin "novus" - "new", and two suffixes: one showing positive action (compare: dictate, imitate,

participate, etc.), and the other denoting process. Thus, innovation is an active process which implements "the new." But how do we create "new", measure "new", know which "new" is correct? How do we become innovative leaders? What are the steps for implementing the "new"? Can we produce the "new" throughout our lives to continually grow as leaders?

Realizing the absence of a theory, I did my own research from the empirical to the theoretical level. From this, I have constructed a theory which currently includes three subtheories and provides a structural model for "creating", as a whole, as well as for a single act of creation. The overall theory provides a single basis for classifying newness, comparing rates of newness, and explaining numerous ways of producing "the new". This theory helps to further clarify the relationship between leadership and innovation. I am using this paper to discuss the use of the theory in a practical research environment rather than to provide a detailed description of the entire theory.

While analyzing creative and innovative work in different individuals and in groups, I have discovered five stages which are always present in every successful innovation process.¹⁷ These five stages are:

- I. existential;
- II. communicative;
- III. instrumental;
- IV. orientational;
- V. innovative.

During the first stage, an idea comes into existence. It occurs in the mind of an individual. During the second stage (if the idea is caught, understood, and accepted at the first stage), it is communicated to others. As a rule these others are those who are closest to us - the wife, the family, a friend. Truly new ideas are often difficult to speak about because we lack the appropriate words. However, those first conversations help to wrap the idea, and provide the opportunity to attempt to materialize the idea in sounds, in tones, in the mechanics of speech. At the third stage (if the idea is accepted at the second), object-instrument relations are clarified.¹⁸ This means that either material aspects or logical proofs are checked and evaluated. At the fourth stage, the object-instrumental relations are oriented into the social environment (needs, goals, morale, ethics, etc.). As a rule, this is a relatively small environment (director, teacher, editor, and so on). At the

fifth stage, the worked-through idea makes its way into society as a whole. It may be presented in any form: a machine, substance, patent, article, report, etc.

I would now like to check the presence of these stages and their applicability to military leadership. To this end, it is reasonable to explore both successful and unsuccessful cases.

The latter may be presented by using the well-known case of Major General William (Billy) Mitchell, who was "the leading U.S. prophet of air power... Mitchell's main ideas were to divide offensive air power into fighter, bomber, and attack, all of which he believed must work together... He was the first to show the effectiveness of aircraft against warships by sinking the battleship SMS Ostfriesland."¹⁹ Mitchell predicted the Japanese attack on Pearl Harbor, he fought for a separate air force, he stressed the idea of vital centers of bombardment for achieving a victory.

He was a real prophet with many ideas for future wars - all of these are common attributes of stage I.

Some researchers try to trace Mitchell's ideas from original authors such as Douhet,²⁰ but surely Mitchell had a lot of his own ideas and was very good at clearly defining the ideas of his European and American colleagues. For example, the idea of "how to sink" the battleship might have come from Alexander de Seversky (Russian).²¹ Mitchell expressed these ideas in a variety of meetings, in lectures, in his Manual... in return, he received other ideas back from his "air-family." This is clearly at the "communicative stage" -- stage II.

But at stage III, Mitchell failed to find out the appropriate instruments for proving his ideas. There were no sophisticated and properly equipped bombers, the appropriate bombs had not been developed - everything was put together in a hurry. In the end, he redefined his objectives, namely, to "effectively" destroy the battleship rather than go through a full experimental process. Mitchell broke the rules of the game by his "effective" sinking, as a result he made many enemies of Navy leaders.²²

Although failing at the third stage, he tried to climb to the fourth. He wrote and published many articles, and "went over the heads of his superiors to appeal to the American public for support for air power... Mitchell was court-martialed for this insubordination in 1925."²³ He continued to work after his resignation, but by this time, editors were beginning to turn away from him. The fourth stage (orientational stage) was condemned to failure since the third stage was not successful.

The fifth stage (innovative) did not take place. Mitchell died in 1936, nearly forgotten.

Only after 1947 "Congress posthumously compared his fate to that of Joan of Arc, promoted him to Major General, and awarded him a special medal".²⁴ For this reason, in an epilogue to my research on Mitchell, I made the pun that: "Prophets make no profits, they need to die in order to stay alive."

From a theoretical point of view, Mitchell could be named "a strategist without strategy," if we mean the strategy of innovation here. He lost his "battle," and ceased to be an effective leader... perhaps the result was that the U.S. suffered the Pearl Harbor tragedy. If so, this was the cost of his failure.

As a successful example, we can take - Vauban - from French military history.

17th Century France, in general, was full of innovative ideas and open to newness. Technical and organizational development were the most important aspects for progress, and the French army led the way in both of these categories. One of the most famous and persistent reformers of the time was Vauban. He was the inventor of the first satisfactory bayonet, he invented ricochet fire, he found fault in bronze guns and suggested the use of iron in its stead, he experimented with sledges for transporting heavy cannons, he invented a new system of attack for taking enemy fortresses, he made valuable contributions to architecture for new fortresses, and much more.

Some historians say that his legendary success was due to the fact that his writings and deeds fell on the well prepared soil of a new spirit of modernization which was very much a topic of interest to the bourgeoisie. Others say he is simply "a brilliant

technician, executing blindly the tasks dictated by historical necessity or the orders of superiors who alone did all the strategic thinking."²⁵

I'll leave it to the historians to solve these problems. However, for this paper, it is only important to highlight that Vauban:

- I. had a lot of ideas;
- II. communicated them properly;
- III. found appropriate instruments for their realization;
- IV. oriented his ideas adequately to meet the needs of society, and especially the needs of King Louis XIV who obviously was an important part of society; as a result he
- V. innovated his ideas successfully.

In current literature it is sometimes called informing key people and 'selling' the idea effectively."²⁶ I prefer to use more neutral, less market-oriented terms.

One can say that both examples are not examples of wars. So let us come back to the fate of Napoleon. He was always looking for what theorists call the "Napoleonic decisive battle," and it was new for him not to be able to find such a battle in Russia. It was new for him to seize a capital, but not to get the symbolic key of the city brought to him, and no surrendering. It was new for him to be left in a foreign capital full of wine stores, yet having less and less food which very soon caused starvation and the fall of the soldiers' morale. It was new for him that the only way out of Moscow - was to retreat along the same way his army had marched earlier, and along which all the villages had been robbed and fields burned. Everything was new for him, and this "new" was arranged for him by Field Marshall Michael Kutusov who was (as some historians say) an "able but less inspired"²⁷ pupil of Alexander Suvorov. Napoleon had not managed to deal with all of this "new."

Imagine the influence of this military leader - Kutusov - who managed to make the Tzar leave his palace, evacuate the Kremlin and the capital; and who managed to assure the population and his army in the necessity of such a step. This is a true genius of the third, fourth, and fifth stages in our model.

Thus, the theory works in analyzing the past: "innovation in leadership" has played a key role in success, while the lack of "innovation in leadership" has resulted in defeat. Knowing the importance of innovation in leadership for wars, we now should investigate the field of innovation itself -- in particular, how to become leaders in innovation.

APPLICATION OF THEORY FOR LEADERSHIP IN INNOVATION

During peacetime, the senior military leader creates forces and structures, he creates plans for training, he creates combat potential, he creates the appropriate living conditions for his personnel, he creates teams for executing missions... So, he creates, creates, creates. In wartime, he creates the vision of a campaign to overplay his enemy and to reduce the fog, he creates versions of operations and courses of action, he creates force structures capable of fighting to win, he creates the right psychological climate for his subordinates' minds, etc. So, again he creates, creates, creates.

He works over new speeches, looks through new reports, prepares new papers, etc. He needs new ideas, new technical decisions, new methods, new techniques, new approaches. Every day brings much "new," and a commander, or a senior military leader, as any leader, should know a lot about how to manage the new.

The theory of innovation helps to explain all of this and gives one an appropriate understanding of the creation process, which now becomes controllable. A leader and his personnel can be quickly exposed to education which crucially determines all the other spheres including economic, social, political, and military. Such education became the first field of application for this new theory in Russia.

Innovative education, as I call it, includes two branches: "Creative Pedagogics"²⁸ and "Creative Metapedagogics."²⁹ Innovative education (Creative Pedagogics) is greatly beneficial; during our experiments, it increased an individual's ideation capabilities 100,000 - 1,000,000 times, and can make an average person equal to a genius in this specific aspect. Innovative education stimulates motivation and leads to a rise in learning capabilities and a boost in productivity.

At the next level, Creative Metapedagogics, works as a specialized metacourse for teachers (managers, leaders), and equips them with the theoretical basis and practical methods for boosting creativity in themselves and in their students. It provides instruments for rearranging any discipline.

These metacourses were developed and tested over the last five years, under the supervision of Ministry of Defense Military Institute and Russian Academy of Sciences Center for Creative Research (both located in Moscow, Russia). They were shown to be efficient and promising and were implemented in five colleges, including two teachers' colleges. Recently, these courses have been successfully implemented in the Center of Foreign Languages, and several scientific and economic institutions in Russia.

In a recent article, written in collaboration with the editor of two central educational journals ("Peoples Education" and "Higher Education Bulletin"), we examined approaches to education as we prepare to enter the next century; we came to an agreement that "innovative education", because of its progressive approach, might very well be called "EDUCATION-XXI." ← [be explicit]

The question then arises: Does this theory have application within the Air University?

CONCLUSION

Looking through the history of military events and leaders' biographies, one can find much evidence that innovative leaders had more of a chance for success than those commanders who were status quo oriented. Innovative orientation, more often than not, differentiates between an effective leader and one who is not. To some extent we can say that innovation forms the leader.

However, throughout history, innovative leadership has often been derived intuitively -- and, for that reason, success was irregular. But, innovation, in all its variations, can be explained by a theory, by a scientific approach which increases the probability of success. This theory clarifies the relationship between innovation and

leadership as well as emphasizes the need to introduce innovative education for bringing up new leaders. These new leaders will possess more powerful instruments for producing "the new" and be better equipped for dealing with future problems.

But, theory itself and new methods of teaching require special research and constant reviewing in order to provide leadership in innovation. This theory of innovation has definite applicability within the Air War College. In particular, the teaching techniques, used in the innovative leadership programs could complement the military course work as well as the research and project assignments of the students. This structured course on innovative education could add one more tool which would continue to place the Air University at the cutting edge of Armed Forces Education - or Education-XXI.

Note: The process of producing "the new" in research follows the same five steps in producing "the new," in everyday activities. Theory (or any other concrete innovation) has these five stages. This article went through the same five stages during its preparation: I. the birth of the idea; II. initial discussions (communication) with the advisor; III. finding instruments for developing the idea (Professional Writing Program Book, all other books, articles, dictionaries, etc.); IV. orientation toward the educational process; V. typing, giving the document to the advisor and seminar director for evaluation (innovation).

More than that, the structure of the article follows the same five stages: I. thesis; II. first communication - historians' opinions (Introduction); III. instrumental aspect (theory, model, terms, etc. for the explanation of innovation in leadership); IV. orientational aspect of ideas for educational problem solving and leadership in innovation; V. innovating (conclusion) with recommendations for implementation of innovative education into Air University. I call this regularity "the law of pentad" which shows the repetition of these five stages in the macro, large, medium, small, and micro processes.

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ANDREI G. ALEINIKOV

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EXPERIMENTAL PROGRAM

Developed a set of psychological tests for individual and collective creativity checking—ALEANDR (1990).

ANDREI G. ALEINIKOV

CHRONOLOGICAL EXPERIENCE

- June 92 to June 93* Student, Air War College, Maxwell AFB, Alabama.
Worked with senior Department of Defense military and civilians on a variety of Air Force and Department of Defense issues. Prepared and delivered presentations on various subjects. Established and conducted Russian language training courses for military and civilian organizations.
- April 92 to June 92* Senior Lecturer, Ministry of Defense Military Institute, Moscow, Russia.
Developed curricula programs, performed research and taught language, linguistics, and military interpretation to cadets and officers. Responsible for the education of interpreters, lawyers, and journalists. Also worked as leading researcher and lecturer in education for the Center for Creative Research, Russian Academy of Sciences in Moscow as well as for the Center of Pedagogic Innovations in Krasnodar, Russia.
- June 91 to April 92* Postdoctoral Fellow, Ministry of Defense Military Institute, Moscow, Russia.
Prepared and finalized my dissertation, "Theory of Innovative Education" and presented it to the Scientific Council.
- June 90 to June 91* Interpreter (Russian-English), Visakhapatnam and Bombay, India.
Provided English interpretation for Russian specialists in India. Also, developed intensive language courses and taught Russian Language to senior Indian officers and English to Russian specialists.
- April 89 to June 90* Postdoctoral Fellow, Ministry of Defense Military Institute, Moscow, Russia.
Gathered research materials for development and presentation of dissertation. Also, received initial appointment as Leading Researcher and Lecturer in Education for the Center for Creative Research, Russian Academy of Sciences, the Center of Foreign Language Study, in Moscow, and for the Center of Pedagogic Innovations in Krasnodar, Russia.
- March 87 to April 89* Senior Lecturer, Ministry of Defense Military Institute, Moscow, Russia.
Developed curricula programs, performed research and taught language, linguistics, and military interpretation to military cadets and officers. Students were of all branches of military services as well as lawyers and journalists.
- Aug. 84 to March 87* Lecturer, Ministry of Defense Military Institute, Moscow, Russia.
Performed research and taught linguistics.
- May 73 to Aug. 84* Teacher of English, translator, interpreter, analyst, Baku, Azerbaijan.
- Sept. 72 to May 73* Teacher of English and German, high school, Volgograd District, Russia.

SELECTED WRITINGS & PUBLICATIONS*

BOOKS AND MONOGRAPHS

Aleinikov, A.G. *Theory of Innovative Education (Teoriya innovatsiy i innovativnoye obucheniye)*. Monograph, 1992 in press.

Aleinikov, A.G. *Creation of Oneself (Sotvoreniye sebya)*. Moscow, in press.

Aleinikov, A.G. *Creativity in Teaching and Studying Theoretical Disciplines. (Tvorchestvo v prepodavanii i izucheniye teoreticheskikh distsiplin)*. Moscow: VKI. 1990.

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Aleinikov, A.G. *Functions of Subjective Post-verb Infinitive in Modern English (Funktsii subjektного priglagnogo infinitiva v sovremennoy angliyskoy yazyke)*. Doctoral dissertation. Baku: APIY, 1982.

ARTICLES

Aleinikov, A.G. "Novatology: Ontological and Gnoseological Aspects" (Novatsiologiya: ontologichesky i gnoseologichesky aspekty). *Novatology*, Simferopol, in press.

Aleinikov, A.G. "Creative Linguistics for Creative Management." *Psychology and Human Behavior Digest*. Bombay, in press.

Aleinikov, A.G. "Sozidogenesis of Language Consciousness Structures" (Sozidogenez struktur yazykovogo soznaniya). *Struktury yazykovogo soznaniya*. Moscow, in press.

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Aleinikov, A.G. "Creative Linguistics in Creative Management" (Kreativnaya lingvistika v kreativnom upravlenii). *Kreativny Menejment*. Moscow: Creator, 1992, Vol. 1, 227-268.

* Overall number of publications is forty plus, but having no list of them in the U.S.A., I included in this curriculum vitae only works from my own references.

ANDREI G. ALEINIKOV

- Aleinikova, E.N. and Aleinikov, A.G. "Creative Activity Formation: Psychopedagogic's and Creative Linguistics' Aspects" (Formirovaniye tvorcheskoy aktivnosti: psihopedagogicheskiy i kreativnolingvistichestiy aspekty). *Struktury yazykovogo soznaniya*. Moscow: Academy of Sciences, 1990, 70-96.
- Aleinikov, A.G. "Creativity and Language Studying" (Tvorchestvo i osvoyeniye yazyka). *Collected Articles*. Moscow: VKI, 1989, 25, 5-10.
- Aleinikov, A.G. "Comparison of Language Structures and Creativity of Interpretation" (Sopostavleniye yazykovykh struktur i kreativnost perevoda). *Aktualniye problemy sopostavitelnogo yazykoznaniya*. Moscow: Institute of Foreign Languages, 1989, 12-18.
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- Aleinikov, A.G. "On the Heuristic Aspects of the Communications Act and Modeling" (Ob evristichnosti akta kommunikatsiy i modelirovaniya). *Yazykovoye soznaniye: stereotipy i tvorchestvo*. Moscow: Academy of Sciences, 1988, 55-76.
- Aleinikov, A.G. "Creative Linguistics: Foundations, Problems and Perspectives" (Kreativnaya lingvistika: obosnovaniye, problemy i perspektivy). *Yazykovoye soznaniye: stereotipy i tvorchestvo*. Moscow: Academy of Sciences, 1988, 77-89.
- Aleinikov, A.G. "Speech Activity Model: Methodical Aspects of Creative Studying Theoretical Disciplines" (Model rechevoy deyatel'nosti: metodicheskiye aspekty tvorcheskogo izucheniya teoreticheskikh distsiplin). *Collected Articles*. Moscow: VKI, 1987, 23, 6-11.
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- Aleinikov, A.G. Creative Linguistic Games (Kreativno-lingvisticheskiye igry). *Problemy etnografiyi i folkloristiki*. Irkutsk, 1992, in press.
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ANDREI G. ALEINIKOV

3886 GOVERNOR'S DRIVE, APT. J-405 • MONTGOMERY, ALABAMA 36111 • (205) 281-9562

EDUCATION

- 1992 - 1993 Air War College of the Air University, Maxwell AFB, Montgomery, Alabama.
- 1989 - 1992 Postdoctoral Fellow, "Theory of Innovative Education," Ministry of Defense Military Institute, Moscow, Russia.
- 1982 - 1984 Graduate and Patent Holder, Institute of Inventive Creativity, Baku, Azerbaijan.
- 1982 Ph.D. Linguistics, Tbilisi State University, Tbilisi, Georgia, S.S.R.
- 1975 - 1979 Ph.D. Candidate, Institute of Foreign Languages, Baku, Azerbaijan.
- 1967 - 1972 B.Ed., Teacher of English and German Languages, State Pedagogical Institute, Volgograd, Russia.

RELEVANT EXPERIENCE

- Twenty years experience in teaching, researching, and translating languages (Primary emphasis on English/Russian languages).
- Senior Lecturer of English for cadets and officers in the Ministry of Defense Military Institute.
- Developed and presented special courses on teaching English/Russian language. Developed a course titled: "Super Intensive Language Studies with a Creative Orientation," 1990, and taught it in both Russia and India.
- Selected to serve, on three separate occasions, as the Chairman of the State Examination Commission to evaluate the testing procedures and overall program for the Institute of International Relations and the University of Foreign Languages, Moscow, Russia.
- Developed a Russian Language Course at the Montgomery Language Center, Montgomery, Alabama, for military, businessmen, clergy, and others traveling to Russia.
- Developed and presented special courses in Innovative Education for leaders, managers, principals and teachers at the Center for Creative Research and at the ILAN Research Center (both under the Russian Academy of Sciences), and for the Center of Foreign Language Study, Moscow, Russia, as well as for the Center of Pedagogic Innovations and five other colleges in Krasnodar, Russia, and various private enterprises for a total of over 1,200 instructional hours.